



iowa department of environmental quality

reply to: Earl C. Voelker, Sr.
phone: 319/653-2135

June 12, 1980

Collis Company
P. O. Box 231
2005 South 19th Street
Clinton, IA 52732

ATTENTION: Mr. R. A. Bell

RE: Wastewater Treatment Facility Inspection
Facility No. 23-26-1-00

Dear Mr. Bell:

Enclosed is a report of an inspection of your wastewater treatment facility conducted by Steve Hoambrecker, Environmental Engineer of this office. Also enclosed is a follow-up sampling inspection report. Copies of these reports have also been forwarded to Virgil Showerman, Plant Manager.

We believe you will find the report self-explanatory and we concur with the conclusions and recommendations.

As an aid to your use of the report, please note that the last item in the detailed report is an itemized listing of report recommendations. This summary provides a concise reference for use when discussing action on all report recommendations. We strongly encourage you to complete the necessary improvements.

If you have any questions concerning the reports, please feel free to contact this office.

Sincerely,

COMPLIANCE DIVISION

Earl C. Voelker, Sr.
Regional Administrator
Regional Office No. 6

ECV:w

Enc.

cc: C&WQD - DEQ, Des Moines
EPA - Kansas City
V. Showerman

Main Office: Henry A. Wallace Building, Des Moines, Iowa 50319



R00312904

RCRA RECORDS CENTER

IOWA DEPARTMENT OF ENVIRONMENTAL QUALITY WASTEWATER TREATMENT FACILITY INSPECTION

Page 1 of 7
23-26-1-00
Facility No.

Name of Facility: Collis Company
 Name of Owner: Chamberlain Manufacturing Corporation - Collis Division
 Address: P. O. Box 231
2005 South 19th Street
Clinton, Iowa 52732 Phone: 319 / 242 / 7731

Receiving Stream: Drainage Ditch - Mill Creek - Tributary to Mississippi River

Date This Inspection: 2/26/80 Date, Last Inspection: 8/29/79

Purpose: Compliance monitoring in conjunction with UHL sampling

Design Capacity 0.57 mgd Lbs BOD PE (BOD)
 Now Treating 0.26 * mgd (Avg Daily) Lbs BOD PE (BOD)

Population Served: _____ % of Total _____ %

Samples Collected: TY Type Composite and grabs ☒ Lab Data Attached

Plant Description Card: ☒ On File ☐ Attached to DEQ Copy * ave. 1/79 - 12/79

Certification Update Memo: ☐ Attached ☐ No Change in D.R.

Significant Industrial Contributors Form: ☐ Attached ☐ On File ☐ No Sig. Contr.

Responsible Operator _____ Grade _____

Persons Interviewed R. A. Bell Title Division Vice President

Virgil Showerman Title Plant Manager

Nello Arterburn Title Plating Superintendent

Inspector: Steve Hoambrecker Date of Report April 14, 1980

Reviewer: Earl C. Vachek, Jr. Date Reviewed 6/5/80

Treatment Process: ☐ Trickling Filter ☐ Activated Sludge, ☐ Lagoon ☐ Disinfection ☒ Other/Supplementary chrome and cyanide ox-red, plus metals precipitation Modification

Process Waste Description: plating operation, zinc cyanide and chrome

1. PERMIT COMPLIANCE SUMMARY:

A. EFFLUENT LIMITATIONS

	SAT	MARG*	UNSAT*
1. EQAP Samples <u>NA</u>			
2. Self-Monitoring Results		X	
3. Samples this Inspection			X

4. Visual Appearance of Effluent: Clear with some foam

5. Visual Appearance, Receiving Stream: Clear with an evident sludge accumulation in the creek.

B. SELF-MONITORING:

	SAT	MARG*	UNSAT*
1. Operation Reports Submitted	X		
2. Required Data Entered on Reports	X		
3. Testing Adequacy			X

C. COMPLIANCE SCHEDULE:

1. Compliance with Schedule			
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WASTEWATER TREATMENT FACILITY INSPECTION

II. FACILITY EVALUATION:

Were deficiencies noted or significant observations made during the inspection? **

ITEM	YES	NO
1. COLLECTION SYSTEM <u>Plating System</u>		
a. Operation & Maintenance		<input checked="" type="checkbox"/>
b. Physical Condition		<input checked="" type="checkbox"/>
c. Dry Weather Capacity		<input checked="" type="checkbox"/>
d. Infiltration/Inflow		<input checked="" type="checkbox"/>
e. By-pass		
2. LIFT STATION(S) (COLLECTION SYSTEM)		
a. Operation & Maintenance		
b. Physical Condition		
c. Capacity		
d. Reliability/Emergency Operation		
3. INDUSTRIAL WASTE PRE-TREATMENT		
a. Waste Toxicity/Compatibility		
b. Strength Reduction		
c. Affect on Treatment Plant		
4. PRE-TREATMENT UNITS (this facility)		
a. Operation & Maintenance	<input checked="" type="checkbox"/>	
b. Physical Condition	<input checked="" type="checkbox"/>	
c. Capacity		<input checked="" type="checkbox"/>
d. Effectiveness		<input checked="" type="checkbox"/>
5. PRIMARY TREATMENT		
a. Operation & Maintenance		
b. Physical Condition		
c. Capacity		
d. Sludge/Scum Removal		
e. Effectiveness		
6. SECONDARY TREATMENT		
a. Operation & Maintenance		
b. Physical Condition		
c. Capacity		
d. Recirculation		
e. Freezing		
f. Effectiveness		
7. FINAL SETTLING	<input checked="" type="checkbox"/>	
a. Operation & Maintenance		<input checked="" type="checkbox"/>
b. Physical Condition		<input checked="" type="checkbox"/>
c. Capacity		<input checked="" type="checkbox"/>
d. Effectiveness		<input checked="" type="checkbox"/>
8. SUPPLEMENTARY TREATMENT <u>Diatomaceous earth filter</u>		
a. Operation & Maintenance		<input checked="" type="checkbox"/>
b. Physical Condition		<input checked="" type="checkbox"/>
c. Capacity		<input checked="" type="checkbox"/>
d. Effectiveness		<input checked="" type="checkbox"/>

ITEM	YES	NO
9. SLUDGE HANDLING AND DISPOSAL	<input checked="" type="checkbox"/>	
a. Operation & Maintenance		
b. Physical Condition		
c. Capacity		
d. Effectiveness		
e. Final Disposal, Solids	<input checked="" type="checkbox"/>	
f. Final Disposal, Liquids		
10. LAGOON STRUCTURES		
a. Maintenance		
b. Physical Condition		
c. Capacity		
d. Cell Configuration		
e. Storage/Drawdown Management		
11. FLOW MEASUREMENT		
A. Operation & Maintenance		
b. Capacity		
c. Continuity		
d. Location/Method/Effectiveness		
12. PUMPING		
a. Operation & Maintenance		
b. Physical Condition		
c. Capacity		
d. Reliability/Emergency Operation		
13. MISCELLANEOUS		
a. Location		
b. Odors		
c. Emergency Operation		
d. By-pass(s)		
e. Equipment		
f. Buildings & Grounds	<input checked="" type="checkbox"/>	
g. Other		
14. STAFFING, OPERATOR CERTIFICATION		
a. Operator, Direct Responsibility		
b. Shift Operator(s)		
c. General Staffing		
15. SUPPLEMENTARY		
a. Permit Availability		
b. Operation Reports Availability		
c. Equipment Records Maintenance		
d. Previously Noted Deficiencies		
e. Improvements		
f. Domestic/Industrial Growth		
g. Other		

**Yes - See comments section for details

**No - No deficiencies or significant observations were noted

**Lack of Entry - Item not applicable or not observed

IOWA DEPARTMENT OF ENVIRONMENTAL QUALITY

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Facility/Permit #

SANITARY LANDFILL INSPECTION ☐WATER SUPPLY INSPECTION ☐WASTEWATER TREATMENT FACILITY INSPECTION ☒AIR QUALITY INSPECTION ☐

ITEM CODE	COMMENTS AND RECOMMENDATIONS
General	<p>The Collis Company is engaged in the manufacturing and plating of primarily interior refrigerator components. The refrigerator components are fabricated, cleaned through a series of acid-alkaline baths, plated in a zinc-cyanide solution, dipped in a chromate solution, rinsed, lacquer coated, oven dried, inspected and packaged for shipping.</p> <p>Domestic wastes from approximately 200 employees are discharged into the City sewer system. Process wastes are treated then discharged to a drainage ditch, tributary of Mill Creek, a tributary of the Mississippi River.</p> <p>Segregated chrome wastes are reduced from the toxic hexavalent state to the trivalent state with sulfur dioxide in an acidic environment. Segregated cyanide wastes receive two stage alkaline chlorination. Automatic oxidation-reduction (ORP) probes are utilized for regulating the chrome reduction and cyanide oxidation processes. Pretreated chrome and cyanide wastes are combined with acid-alkaline waste streams in a neutralization tank where the pH is to be maintained near 8.5 before discharging to settling basin where the trivalent chrome and zinc are to be precipitated in a sludge. A polymer is added to the settling basin influent to enhance settling. Following the settling basin the waste stream is pumped through a diatomaceous earth pressure filter, discharging into the drainage ditch, a tributary of Mill Creek.</p> <p>Sludge is dewatered by a pressure filter. The dried sludge is stored in a roll-off box then taken to either the Clinton County East landfill or several possible sites in Illinois. Additional comments in section 9.</p>
A2	<p>Operational records were reviewed from June - December 1979 indicating general compliance with effluent limitations except for one excursion in June causing permitted suspended solids and zinc average and maximum limitations to be exceeded.</p>
A3, B3	<p>Numerous samples were collected during this inspection. An 18 hour time composite sample and a grab sample of the treatment plant effluent were collected. Additional grab samples were collected from sludge storage container observed leaking, yard drainage into Mill Creek, 12 inch storm drainage pipe under sludge lagoons, S 19th Street storm drain runoff and a sludge deposit from Mill Creek. Table I illustrating these results is attached to this report. A copy of the University Hygienic Laboratory results is also attached.</p> <p>Various samples collected were split between UHL and Collis personnel. An 18-hour composite sample and a grab sample of the final effluent plus a grab sample of the 12 inch storm drain running under the sludge lagoons were split. Table II, accompanying this report illustrates the results of the split samples.</p>

SANITARY LANDFILL INSPECTION ☐WATER SUPPLY INSPECTION ☐WASTEWATER TREATMENT FACILITY INSPECTION ☒AIR QUALITY INSPECTION ☐Page 4 of 723-26-1-00
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ITEM CODE	COMMENTS AND RECOMMENDATIONS
	<p>The split sample comparison indicates a substantial variance in results reported, especially for total chromium reporting. Total chromium results analyzed by the UHL were generally 10 fold plus in excess of those reported by Collis Company. Other metal analysis results were not consistent with those reported by the UHL.</p> <p>It is recommended that the Collis Company get together with Lee Friell of the UHL to check on laboratory procedures. It is also possible that the UHL would send Collis Company a set of spiked samples for a quality control check.</p> <p>Results of the treatment plant effluent indicate non-compliance with effluent limitations. 46 mg/l (composite) and 8.2 mg/l (grab) total chromium greatly exceed the maximum permitted effluent limitations of .38 mg/l.</p> <p>Total chromium results 46 mg/l (composite) and 8.2 mg/l (grab) greatly exceed the maximum permitted effluent limitations of 0.38 mg/l. Total suspended solids results 604 mg/l (composite) and 122 mg/l (grab) also greatly exceed the maximum permitted effluent limitation of 15 mg/l. Zinc results 42 mg/l (composite) and 6.4 mg/l (grab) excessively exceed the maximum permitted effluent limitation of 0.75 mg/l. The 0.6 mg/l cyanide analysis on the grab sample also exceeds the permitted effluent limitation of 0.4 mg/l.</p> <p>Excessive discharge concentrations are probably directly related to the diatomaceous earth filter problem causing the plant to be shut down. Similar occurrences may reflect the excessive sludge deposits observed in Mill Creek.</p> <p>Results of the sample collected from the runoff from the sludge storage container indicate a high organic substance 6700 mg/l BOD and 46,200 mg/l COD with excessive metals concentrations, 140 mg/l total chrome, 3.0 mg/l hexavalent chrome, 58 mg/l total zinc and 41 mg/l total iron..... Another incident of careless operational practice.</p> <p>The analyses of the sample of yard drainage into Mill Creek contained the gray colored runoff from the sludge storage container. The runoff from the sludge container was diluted about 9:1 with water which had overflowed the settling basin. Parameters not expected to be present in the settling basin overflow were nearly diluted 10 fold in the sample to the creek: BOD - 650 mg/l, COD 4600 mg/l, suspended solids - 160 mg/l and iron - 4.2 mg/l. Hexavalent chrome and zinc, expected to be present in settling basin, were present in a diluted concentration of the sludge container runoff but greater than a 10 fold decrease. Hexavalent chrome discharge to the creek was 2.0 mg/l and the zinc concentration was 7.2 mg/l. Total chrome was measured at 12 mg/l concentration.....All parameters exceed any allowable effluent discharge limitations.</p>

SANITARY LANDFILL INSPECTION ☐
WATER SUPPLY INSPECTION ☐
WASTEWATER TREATMENT FACILITY INSPECTION ☒
AIR QUALITY INSPECTION ☐

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ITEM CODE	COMMENTS AND RECOMMENDATIONS
	<p>It was suspected that the 12 inch storm sewer might possibly contain excessive metals from the sludge lagoons. Metal concentrations - 0.28 mg/l total chrome, 0.02 mg/l lead and 0.64 mg/l zinc do not necessarily prove or disprove this theory.....Additional samples from the storm sewer may need to be collected.</p> <p>The sludge sample collected from the creek indicates an excessive cumulation of chemicals typical of Collis Company's discharge: Total chromium - 5500 mg/l, hexavalent chromium - 8.0 mg/l, total zinc - 2900 mg/l and cyanide - 1800 ppm. Lead, moderately present in Collis Company discharge, was monitored at 4.4 mg/l. Nickel, previously utilized by Collis Company, was analyzed at 15 mg/l concentration in the sludge.....Pending further investigation, it may be necessary to dredge areas of the creek containing the contaminated sludge.</p>
4a, b	<p>The automatic lime feeder system to the neutralization basin was inoperative at the time of the inspection. Consequently, bags of lime were being batch dumped into the neutralization basin.</p> <p>Batch dumping as observed is not as capable of maintaining a steady pH, necessary for adequate precipitation of heavy metals. The continuous feed system should be repaired as soon as possible.</p>
7a	<p>During the inspection, waste treatment operational problems made it necessary to shut down the plant. During the shut down period, the lift pump to the settling basin was not shut off causing the settling basin to overflow, bypassing the final filter.</p> <p>Drainage patterns in the snow as well as soil erosion problems tend to indicate that the settling basin has overflowed other times than the incident observed this inspection.</p> <p>Operational procedures should be established to prevent similar incidents from occurring in the future.</p>
8a, 8b	<p>During the inspection the diatomaceous earth filter developed operational problems. The gasket was not sealing properly, plus problems developed with the hydraulic system. This problem may have been complicated by the fact that the normal operator went home sick, leaving the facility without someone who was directly familiar with the operation of the facilities. Due to the filter problems, the entire plant had to be shut down.</p> <p>Someone familiar with the operation of the filter presses should be available at all times. It may be necessary to train others as an auxiliary job.</p>

SANITARY LANDFILL INSPECTION ☐
WATER SUPPLY INSPECTION ☐
WASTEWATER TREATMENT FACILITY INSPECTION ☒
AIR QUALITY INSPECTION ☐

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ITEM CODE	COMMENTS AND RECOMMENDATIONS
9a	<p>The sludge filter press appeared to be operating satisfactorily, however, problems were noted relating to the handling aspect of the sludge. The dewatered sludge is transferred from the filter press to an auger dumping the sludge in a rolloff box. There was an accumulation of sludge piled up beneath the transfer point from the belt of the auger. This area is subject to runoff into the creek, potentially carrying toxic metals (chrome and zinc) into the creek.</p> <p>Also observed during the inspection was the disposal of a milky grey substance into the rolloff box which leaked from the rolloff box eventually discharging into the creek.</p>
9e	<p>Prior to 10-31-77, the disposal of the chromate sludge was authorized for disposal at the Clinton County East Landfill, at which time the disposal of all sludges was terminated by the Clinton County Area Solid Waste Agency. After sludge disposal at the Clinton County East Landfill was terminated, it was reported that the sludge was being hauled to Illinois for disposal.</p> <p>During this inspection, it was learned that the chromate sludge has been taken to the Clinton County East Landfill for the past several months.</p> <p>Heavy metal sludges similar to Collis Company's sludge must have a valid special waste authorization for disposal at a sanitary landfill in Iowa. Acceptance of such waste must have approval from the landfill's governing agency and must be identified upon receipt at the landfill.</p>
13f	<p>Just prior to this inspection, a spill of chromate solution occurred on plant property during a transfer of the liquid. The spilled chromate solution was reportedly batch treated with sodium bisulfite and lime to reduce the chromate from hexavalent to the trivalent state and stabilize the pH. However, minimal attempts were made to satisfactorily contain and clean up the situation prior to Departmental insistence. The chromate solution was observed pooled in low lying areas plus tracked from facilities, traceable on the snow packed streets.</p> <p>Results of a sample collected from street runoff containing the spilled chromium solution indicated excessive amounts of total (45 mg/l) and hexavalent 27 (mg/l) chromium plus 4.2 (mg/l) zinc and 0.86 (mg/l) lead being discharged into the creek as a result of poor spill clean up procedures.</p> <p>In general, housekeeping behind the facilities in the area of the treatment plant and chemical storage area appears extremely poor. Several corrective measures which it is felt should be considered are: containment dike around storage tanks and a truck loading - unloading</p>

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SANITARY LANDFILL INSPECTION ☐WATER SUPPLY INSPECTION ☐WASTEWATER TREATMENT FACILITY INSPECTION ☒AIR QUALITY INSPECTION ☐

ITEM CODE	COMMENTS AND RECOMMENDATIONS
	<p data-bbox="332 521 1421 649">facility with containment area capable of retaining spilled chemicals. This approach might be a substitute for collecting runoff from this area, recommended in the last inspection report.</p> <p data-bbox="332 649 1461 744">A spill report has been filed with EPA and DEQ concerning the chromate spill.</p> <p data-bbox="714 808 1136 851">SUMMARY OF RECOMMENDATIONS</p> <ol data-bbox="349 872 1542 1489" style="list-style-type: none">1. Effluent limitations must be continuously met.2. Discharges into Mill Creek other than treated effluent are not permitted and should cease.3. A laboratory quality control check should be made.4. Proper spill containment and cleanup measures must be established and utilized.5. Proper sludge handling procedures must be utilized.6. The continuous lime feeder system should be repaired.7. Wastewater plant operation shut down procedures should be established.8. Someone familiar with operation of the filter process should be available at all times. <p data-bbox="373 1776 438 1808">SH:w</p>

TABLE I

Results of Samples collected this Inspection

	TSS	Total Chrome	Hex Chrome	Zinc	Lead	Cyanide	BOD	BOD
Maximum Permit Limitations	15	0.38	0.05	0.75	NA	0.4	NA	NA
Final Effluent 18 hr. composite	604	46	<0.05	42	0.16			
Final Effluent grab sample	122	8.2	<0.05	6.4	0.03	0.6		
Sludge storage container leakage	1160	140	3.0	58	0.26		6700	42600
Yard drainage into Mill Creek		12	2.0	7.2	0.12		650	460
Street runoff into storm sewer		45	27	4.2	0.86			
Reported Storm Drain under lagoons		0.28		0.64	0.02			
Downstream stream sediment sample		5500	8.0	2900	4.4	1800		

TABLE II

	Comparison of Split Samples				Storm Sewer under Lagoons	
	Final Effluent 18 hr. composite	Final Effluent		Grab	UHL	Collis
	UHL	Collis	UHL			
TSS	604	424	122	111.4	-	-
Zinc	42	55.26	6.4	0.36	0.64	0.55
Hex Chrome	<0.05	(0.25)	0.05	0.008	-	<0.01
Total Chrome	46	(4.95)	8.2	0.63	0.28	0.01
Lead	(0.16)	0.02	0.03	0.03	0.02	0.05

All results reported in mg/l.

WATER QUALITY REPORT

HYG. NO. 1000, Des Moines Branch
H.A. WALLACE BUILDING
DES MOINES, IOWA 50319

Town	Clinton	Clinton	
Source	Collis Co.	Collis Co.	
Specific Location	Leakage from sludge collection box, prior to landfill; grab	Yard drainage to Mill Creek, grab	
Date Collected	2/26/80	2/26/80	
Date Received	2/27/80	2/27/80	
Lab. Number	5787	5789	
Collection Time	1300	1320	FIELD DATA
pH			
Temperature			
Dissolved Oxygen			
BACTERIOLOGICAL EXAMINATION			
Fecal Coliform/100 ml			
CHEMICAL ANALYSIS (as mg/l unless designated otherwise)			
Conductance (micromhos)			
MBAS (as LAS)			
pH (units)			
Alkalinity: P			
T			
NITROGEN: Organic N			
Ammonia N			
Nitrite N			
Nitrate N			
Nitrate as NO ₃			
RESIDUE: Total			
Fixed			
Volatile			
Filtrable Residue T			
F			
V			
Nonfiltrable Residue T	1,160	160	
F			
V			
Soluble Matter (ml/l)			
PHOSPHATE: Filtrable P			
Total P			
Dissolved Oxygen			
BOD	6,700	650	
COD	46,200	4600	
Grease or Oil			
Turbidity (JTU)			
Total Hardness (as CaCO ₃)			
Calcium (Ca ⁺⁺)			
Magnesium (Mg ⁺⁺)			
Chloride (Cl ⁻)			
Sulfate (SO ₄ ⁻²)			

REMARKS:

Grey colored

W.J. HAUSLER, JR., Ph.D.

DIRECTOR

MAR 11 1980

WATER QUALITY REPORT METALS

STATE HYGIENIC LABORATORY, Des Moines Branch
The University of Iowa
515:281-5371

Town	Clinton	Clinton	Clinton
Source	Collis Co.	Collis Co. WWTP	Collis Co. WWTP
Specific Location	Storm sewer drain S. 19th St. road runoff	final effluent 18 hr time composite at weir inside filter house	final effluent grab at outfall into creek
Date Collected	2/27/80	2/26-27/80	2/27/80
Date Received	2/28/80	2/28/80	2/28/80
Lab Number	5813	5815	5816

METALS ANALYSIS (as mg/l unless designated otherwise)

Arsenic			
Barium			
Cadmium			8.2
Chromium, Total	45	46	
Chromium, Hexavalent	27	<0.05	<0.05
Copper			0.03
Lead	0.86	0.16	
Mercury			
Nickel			
Selenium			<0.1
Amenable Cyanide			6.4
Zinc	4.2	42	122
Total suspended solids		604	0.6
Cyanide			

REMARKS:

24 hr average flow
0.25 mgd

Instantaneous flow was
not available

COLLECTOR
REPORT TO

Meierhoff/Prill
DEQ Region 1

Date Reported **APR 03 1983**

W.J. Housler Jr., Ph.D.
Director

Zinc, Total	58	2900	4.2
Iron, Total	41	1800 ppm**	
Cyanide			

REMARKS:

*Sample filtered for Hex Cr

**ppm by dry weight. Interferences may have prohibited full recovery of cyanide.

COLLECTOR
REPORT TOMeierhoff/Prill
DEQ #6
Washington, IA

Date Reported MAR 11 1980

W.J. Haasler Jr., Ph.D.
Director

WATER QUALITY REPORT
METALSSTATE HYGIENIC LABORATORY, Des Moines Branch
The University of Iowa
515:281-6371

Town	Clinton		
Source	Collis Co.		
Specific Location	12" pipe under sludge lagoons, N of plant		
Date Collected	grab		
Date Received	2/27/80		
Lab Number	2/28/80 5817		
METALS ANALYSIS (as mg/l unless designated otherwise)			
Arsenic			
Barium			
Cadmium			
Chromium, Total	0.28		
Chromium, Hexavalent			
Copper			
Lead	0.02		
Mercury			
Nickel			
Selenium			
Silver			
Zinc	0.64		

REMARKS:

approximate flow may
be 1 gal/minCOLLECTOR
REPORT TOMeierhoff/Prill
DEQ Region 1

Date Reported

APR 03 1980

W.J. Hauster Jr., Ph.D.
Director

①

COLLIS COMPLIANCE SAMPLING

2-26/27-80

Arrived at the plant about 1000 hrs on 2-27-80 and met with Nelo Audertern of Collis Co. and Steve Hoambrucker of IDEO. In going to the pollution control part of the plant on the North side it was apparent a chemical spill had occurred in the driveway. We then proceeded to set an ISCO in the filtration building with the intake in a bucket (plastic) being continuously filled with effluent. While setting up it appeared plant was experiencing problems in their pollution control section and shortly afterward we learned plant had closed down until problems had been repaired. We reset the sampler to start at 1300 hrs. and when the plant came back on line we would know when, and samples could be taken. The sampling interval was set to 15 minutes. Grab samples were then taken as:

1) Sludge from Mill Creek by the box culvert on S 19th St. to be analyzed for Cyanide, Total and Hexavalent Chrome, Zinc, Nickel, Lead.

2) Drainage from the Sludge collection box - after which men had dumped something into it, to be analyzed for BOD, COD, TSS, Total and Hexavalent Chrome, Zinc, Lead and Iron.

3) Yard drainage to Mill Creek collected by IDEO to be analyzed for same parameters as (2)

②

We returned to the plant at about 1100 hrs.
on 2-27-80. The drive into the plant had
been scraped with the snow and spill piled
up in the center of the road.

(2)

We returned to the plant at about 1100 hrs. on 2-27-80. The drive into the plant had been scraped with the snow and spill piled before the sludge lagoons. Sand had then been spread over the drive. Spill contaminants were still present to the right and left of the drive. In addition "yellow" snow was evident in the street outside the plant (S. 19th St.) and in the parking lot south of the plant. This spread of the contaminants was caused by trucks and vehicles using the drive north of the plant and then leaving the plant.

The composite sampler was then taken down, samples compared with a split given to plant personnel. It was noted that the sampler began taking samples about 1800 hrs on 2-26-80 and that is the time plant personnel stated the plant came on line. What we had then was an 18 hr. composite.

Some of the samples in the composite were relatively clear while others had a definite sediment layer in the bottom of the bottle.

Parameters run from the composite samples included TSS, Total Chrome, Hexavalent Chrome

2mi and Lead. Flow value guessed by plant personnel for the 24 hr. period - on an average was 0.25 mad.

A Grab sample was then taken of the effluent at the outfall before discharging into creek. Parameters run from the sample included TSS, Total Cyanide, Ammonia Cyanide, Zinc, Total and Hexavalent Chrome and I think lead and Iron.

Another grab sample was taken at a pipe which drains the Bridge Lagoons. The pipe had the appearance of being corroded and the glass was very roughly one gallon per minute. A metal sample to be analyzed for Total and Hexavalent Chrome, Zinc, Lead and Iron was taken here. We then reported the situation to Steve

Hornbaker. Although the temperature was now dropping with much warming in the after cannot say at that time the spill was leaving the plants ground was run off. It

the condensate was not cleared up and the temperature got above freezing then the spill would leave the plant. Snow was melting in the Abate, though, with yellowish colored water entering the alarm drums. This was the residue of the spill left in the other hydrolysis leaving the plant, being caused away by melting snow to the creek. We took a grab sample for metals analysis

(Total and Hexavalent Chrome, Zinc, Lead and Iron - Analysis)

(4)

(4)

the storm sewer manhole, at Steve Hoambucher's request. This sample and all samples taken on 2-26-80 were not duplicated by plant personnel. They did take samples on the outfall and sludge drainage pipe at the same time we did.

Before leaving the plant we observed that nothing new had been done to control the spill on the sides of the dike and this was reported to Steve Hoambucher. In discussing the situation with plant personnel it was learned that the plant had treated the spill with Sodium Bisulfate. They also stated they would scrape the remainder of the spill and dump the spill contents into a sludge lagoon. Take it away Steve.

Total 7 samples collected.

WATER QUALITY
METALSThe Dr
515:281-0371

Town Source Specific Location	Clinton Collis Company 12" storm drain line	Clinton Collis Company Plant effluent	
Date Collected	4/07/80 (1:15)	4/07/80 (1:00 pm)	
Date Received	4/08/80	4/08/80	
Lab Number	6817	6818	
METALS ANALYSIS (as mg/l unless designated otherwise)			
Arsenic			
Barium			
Cadmium			
Chromium, Total	0.11*	0.16*	
Chromium, Hexavalent	<0.01	<0.01	
Copper	0.21*	0.04*	
Lead	<0.01*	<0.01*	
Mercury			
Nickel	<0.1*	<0.1*	
Selenium			
Silver			
Zinc	1.4*	0.07*	
Cyanide		0.5**	

REMARKS:

*Reported as total metals.
**Plastic liner under jar cap is preferable; aluminum liner adds no benefit in isolating the highly alkaline sample from metal.
Hoambrecker
DEQ #6
Washington, IA

COLLECTOR
REPORT TO

Date Reported

W.J. Hausler Jr., Ph.D.
Director

APR 30 1980